

REMARKS

Claims 52, 53, and 57 through 61 are pending in this application. Claims 52 and 53 are amended herein. Claims 57 through 61 are added herein. Claims 1 through 51 and 54 through 56 are cancelled herein. Support for the amendments to the claims may be found in the specification and claims as originally filed. In particular, support for the element 'particles' may be found at page 3, line 21 of the specification, while support for the diameters may be found in Figs. 2, 3, and 9. Reconsideration is requested based on the foregoing amendment and the following remarks.

Objections to the Claims:

Claim 52 was objected to for an informality. The informality has been corrected as suggested by the Examiner. The Examiner's suggestion is appreciated. Withdrawal of the objection is earnestly solicited.

Claim Rejections - 35 U.S.C. § 112:

Claims 52 and 53 were rejected under 35 U.S.C. § 112, second paragraph, as indefinite. Claims 52 and 53 have been amended to make them more definite. In particular, the lower region has a diameter such that the air bubble will be held substantially in place. The middle region may not hold the air bubble. Withdrawal of the rejection is earnestly solicited.

Double Patenting:

Claim 52 was rejected under the judicially created doctrine of obviousness-type double patenting as unpatentable over claim 23 of US 6,340,570 to Anderson. The rejection is traversed. Reconsideration is earnestly solicited.

M.P.E.P. § 804 requires a Graham v. John Deere, 383 U.S. 1, 148 U.S.P.Q. 459 (1966)-type factual inquiry for an obviousness-type double patenting rejection. A conclusion of obviousness-type double patenting must be made in light of these factual determinations.

It is submitted that the assertion at page 5 of the Office Action to the effect that claim 23 of Anderson '570 is directed to the same subject matter and falls entirely within the scope of claim 52 is not the result of a Graham-type factual inquiry. Amended claim 52 presents three alternative embodiments for the middle region. Claim 23 of Anderson '570, on the other hand, requires the middle region be of intermediate diameter between the upper and lower regions. Thus, claim 23 does not teach the claimed embodiments. This difference is submitted to be at least as great as the differences between the groups of restricted claims.

In particular, amended claim 52 recites, in pertinent part:

"wherein said upper region is separated from said lower region by said middle region having 1) a decreasing diameter from said upper region toward said lower region, 2) a diameter less than said upper region but greater than said lower region, or 3) a diameter equal to said lower region, wherein said lower region has a sufficiently small bore to hold an air bubble in it with an aqueous solution above and below it."

Claim 23 of Anderson '570 recites:

23. A method for concentrating microorganisms from a biological sample,
wherein said method comprises the steps of:

(a) adding a sample containing microorganisms to an ultracentrifuge tube and

(b) centrifuging said sample in said tube to concentrate said microorganisms,

said ultracentrifuge tube comprising an upper region, a middle region and a lower region wherein an inner diameter of said upper region is larger than an inner diameter of said middle region and wherein an inner diameter of said middle region is larger than an inner diameter of said lower region, wherein at least two different fluids are present, each in different regions and held separately with substantially no diffusion between each before centrifugation, wherein said lower region has a sufficiently small bore to hold an air bubble in it with an aqueous solution below it and in the middle region.

Claim 23 of Anderson '570 may be seen to neither teach, disclose, nor suggest an upper region separated from a lower region by a middle region having 1) a decreasing diameter from the upper region toward the lower region, 2) a diameter less than the upper region but greater than the lower region, or 3) a diameter equal to the lower region, as recited in amended claim 52.

Furthermore, the assertion at page 5 of the Office Action to the effect that claim 52 is *anticipated* by claim 23 of Anderson '570 is submitted to be inapposite to an obviousness-type rejection.

The Applicants request respectfully that they be accorded the benefit of the protections offered by the judicially-created doctrine of double patenting. In particular, the Applicants request the Office Action provide a reason or motivation for a person of ordinary skill in the art at the time the invention was made to have modified claim 23 of Anderson '570 to amended claim 52.

Finally, this application and Anderson '570 have the same priority date and thus their patent terms should be the same (not counting patent term extensions). Therefore, it is submitted that there is no purpose for this rejection, since a Terminal Disclaimer would only affirm the identity of the respective patent terms. Amended claim 52 is thus submitted to be allowable. Withdrawal of the rejection of amended claim 52 is earnestly solicited.


Claims 53 and 57 through 61 depend from amended claim 52 and add additional distinguishing elements. Claims 53 and 57 through 61 are thus also submitted to be allowable. Withdrawal of the rejection of claims 53 and 57 through 61 is earnestly solicited.

Allowable Subject Matter:

Although claim 53 was listed among the 35 U.S.C. § 112 rejections, no particular grounds of rejection were noted for claim 53. Since claim 52 and 53 have been amended to make them more definite, and claim 53 was not rejected under any other provision of the patent statute, the Applicants presume claim 53 to be allowable. The Applicants therefore acknowledge with appreciation the allowance of claim 53.

Conclusion:

Accordingly, in view of the reasons given above, it is submitted that all claims 52, 53, and 57 through 61 are allowable over the cited references. Since the objections to the claims have been addressed and the claims have been amended to overcome the rejections based on 35 U.S.C. § 112, second paragraph, it is submitted that all of claims 52, 53, and 57 through 61 are now allowable. Allowance of all claims 52, 53, and 57 through 61 and of this entire application are therefore respectfully requested.

RESPECTFULLY SUBMITTED,					
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Version with markings to show changes made.

52. (Amended) A method for concentrating [microorganisms] particles from a [biological] sample, wherein said method comprises the steps of:

(a) adding a sample containing [microorganisms] particles to [an ultracentrifuge] a centrifuge tube, and

(b) centrifuging said sample in said tube to concentrate said [microorganisms] particles,

said [ultracentrifuge] centrifuge tube comprising an upper region, a middle region and a lower region wherein an inner diameter of said upper region is larger than an inner diameter of said lower region, wherein said upper region is separated from said lower region by said middle region having 1) a decreasing diameter from said upper region toward said lower region, 2) a diameter less than said upper region but greater than said lower region, or 3) a diameter equal to said lower region [wherein said lower region has a closed bottom., wherein at least two different fluids are present, each in different regions and held separately with substantially no diffusion between each before centrifugation], wherein said lower region has a sufficiently small bore to hold an air bubble in it with an aqueous solution above and below it [and in the middle region].

53 (Amended). The method of claim 52 further comprising detecting a band of particles in the lower region by a detection technique, which could not have been detected if the band were in the upper region by the same detection technique.